

ART 34 AMDT

Claims:

1. An adjustable lumbar support assembly (12),
comprising

5 an adjustable lumbar support member (14);

a bowden cable actuator (16) for actuating a bowden
~~cable (18; 70) having a first wire portion (52; 74) and a~~
second wire portion (26; 74); and

a transmission amplifier assembly for the Bowden.
10 cable (18; 70), the transmission amplifier assembly (10;
10''') comprising a rotary member (82) being supported
rotatably, the bowden cable (18; 70) with the first wire
portion (52; 74) being connected between the bowden cable
actuator (16) and the transmission amplifier assembly
15 (10; 10''') and with the second wire portion (26; 74)
being connected between the transmission amplifier
assembly (10; 10''') and the adjustable lumbar support
member (14), and the first wire portion (74) and the
second wire portion (74) of the bowden cable (18; 70)
20 being both coupled to the rotary member (82) such that
movement of the first wire portion (52; 74) imparts
rotation of the rotary member (82) and thereby movement
of the second wire portion (26; 74) in accordance with a
predetermined transmission ratio, the movement of the
25 second wire portion (26; 74) being facilitated compared

ART 24 AMDT

to the movement of the first wire portion (52; 74) by the predetermined transmission ratio.

2. The adjustable lumbar support assembly
5 according to claim 1, wherein the transmission amplifier
assembly (10; 10'') is arranged such that the movement
~~of the first wire portion (52; 74) imparts the movement~~
of the second wire portion (26; 74), which is increased
by the predetermined transmission ratio with respect to
10 the movement of the first wire portion (52; 74).

3. The adjustable lumbar support assembly
according to claim 1 or claim 2, wherein the first wire
portion (74) and the second wire portion (74) both are
15 directly fixed at the rotary member (82).

4. The adjustable lumbar support assembly
according to any one of claims 1-3, wherein the first
wire portion (74) and the second wire portion (74) extend
20 both along a periphery of the rotary member (82).

5. The adjustable lumbar support assembly
according to claim 4, wherein the first wire portion (74)
and the second wire portion (74) extend both along
25 respective grooves formed in the periphery of the rotary
member (82).

ART 34 AMDT

6. The adjustable lumbar support assembly according to any one of claims 1-5, wherein the rotary member (82) has a substantially longitudinal shape.

5

7. The adjustable lumbar support assembly ~~according to claim 6, wherein the rotary member (82) has~~ a substantially elliptic shape.

10 8. The adjustable lumbar support assembly according to any one of claims 1-7, wherein the rotary member (82) has a substantially increasing width from a portion of the rotary member (82) where the first wire portion (74) leaves the periphery of the rotary member

15 (82) to a portion of the rotary member (82) where the second wire portion (74) leaves the periphery of the rotary member (82).

20 9. The adjustable lumbar support assembly according to any one of claims 1-8, wherein the rotary member (82) is supported rotatably around a point of rotation (86), the point of rotation (86) being arranged eccentrically in a longitudinal direction of the rotary member (82).

25

APT 34 AMDT

10. The adjustable lumbar support assembly
according to any one of claims 1-9, wherein the first
wire portion and the second wire portion are formed by a
single wire (74) movable in the sleeve (72) of the bowden
5 cable (70).

~~11. The adjustable lumbar support assembly~~
according to any one of claims 1-10, wherein the sleeve
(72) of the bowden cable (70) is held in place by a
10 holding member (76).

12. The adjustable lumbar support assembly
according to any one of claims 1-11, wherein a guiding
member (78) for guiding the first wire portion (74)
15 towards the rotary member (82) and a guiding member (78)
for guiding the second wire portion (74) from the rotary
member (82) are provided.

13. The adjustable lumbar support assembly
20 according to claim 12, wherein the guiding member for the
first wire portion (74) and the guiding member for the
second wire portion (74) are formed by a common guiding
member (78).

25 14. The adjustable lumbar support assembly
according to any one of claims 1-13, wherein the

ART 34 AMDI

transmission amplifier assembly (10; 10'') is arranged
such that a lever arm defined between the second wire
portion (74) and a point of rotation (86) of the rotary
member (82) is larger than a lever arm defined between
5 the first wire portion (74) and the point of rotation
(86) by the predetermined transmission ration.

15. The adjustable lumbar support assembly
according to any one of claims 1-14, wherein the
10 transmission amplifier assembly (10; 10'') is attached
to the adjustable lumbar support member (14).

16. A method of adjusting a lumbar support member,
comprising the steps:

15 causing motion of a first wire portion (52; 74)
of a bowden cable (18; 70) relative to a sleeve (54; 72)
of the bowden cable (18; 70) via a bowden cable actuator
(16);

converting the motion of the first wire portion
20 (52; 74) into motion of a second wire portion (26; 74) in
accordance with a predetermined transmission ratio, the
conversion being such that the motion of the second wire
portion (26; 74) being facilitated compared to the motion
of the first wire portion (52; 74) by the predetermined
25 transmission ratio;

ART 31 AMEND

adjusting the lumbar support member (14) in response
to the motion of the second wire portion (26; 74).

17. The method according to claim 16, wherein the
5 motion of the first wire portion (52; 74) is converted
into the motion of the second wire portion (26; 74) using
~~a transmission amplifier assembly as defined in any one~~
of claims 1-15.